

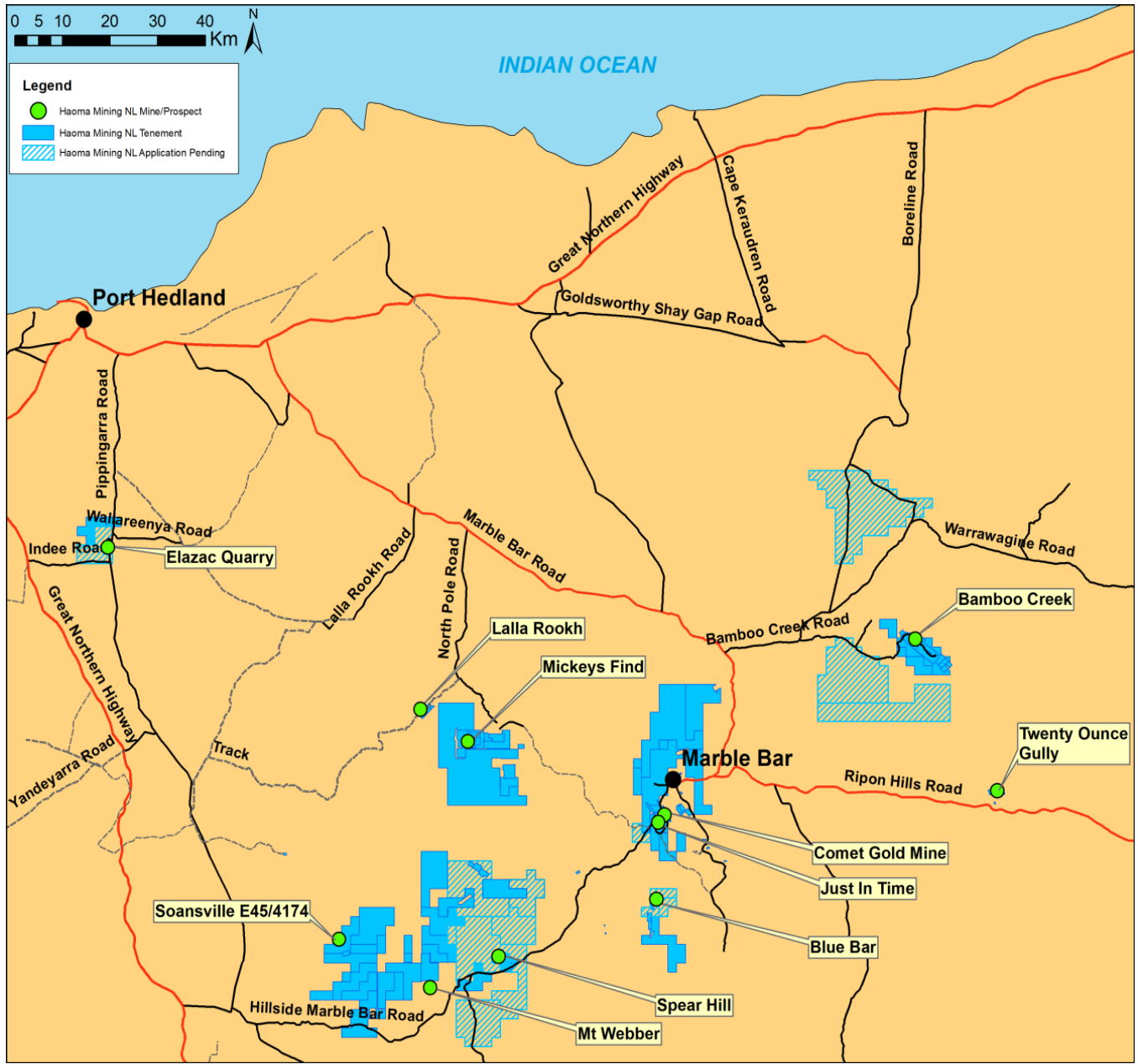


# Haoma Mining NL

A.B.N 12 008 676 177

## CHAIRMAN'S ADDRESS TO SHAREHOLDERS

By Gary Morgan, Wednesday, March 16, 2022



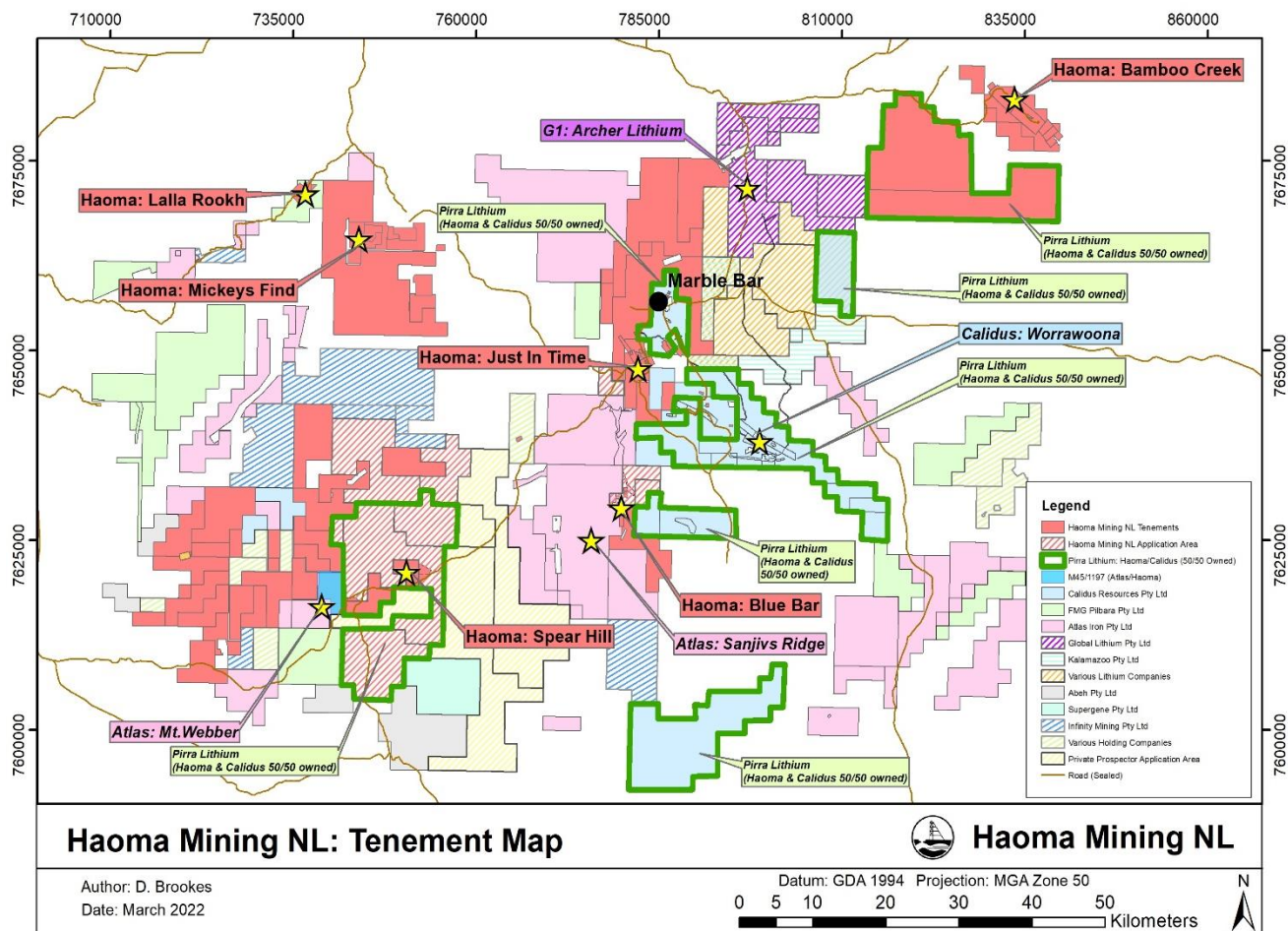
**Figure 1a:** Location map of Haoma Mining Pilbara mining tenements.

### Registered Office & Head Office:

Tonic House, 386 Flinders Lane, Melbourne, Vic., 3000, GPO Box 2282U, Melbourne, Vic., 3001.

Telephone (03) 9629 6888, Facsimile (03) 9629 1250

Email: [haoma@roymorgan.com](mailto:haoma@roymorgan.com) Website: [www.haoma.com.au](http://www.haoma.com.au)



**Figure 1b: Haoma’s Marble Bar-Normay-Mt Webber-Spear Hill tenement groups showing E45/5834 (under application) and E45/5835 (under application).**

## Welcome to all Haoma Mining shareholders.

Mining in Australia is once again going to save Australia during the current world crisis.

Today I am going to present information on Haoma's activities covering the last 12 months – while a difficult time due to Covid-19 – we have achieved a lot.

Location	Gold	PGM	Iron Ore	Nickel	Lithium	Rare Earths	Strategic Minerals	Copper	Silver, Lead, Zinc	Dolerite
Bamboo Creek	●	●	●	●		●			●	
Mt Webber JV	●	●	●			●	●			
Mt Webber Region to Soansville	●	●	●	●		●	●			
Spear Hill	●	●			●	●	●		●	
Marble Bar including Comet Mine	●	●			●	●	●		●	●
Normay/Mickeys Find	●	●				●	●	●	●	●
Cookes Hill	●	●			●	●	●		●	●
Pirra Lithium (equally owned by Haoma and Calidus Resources)					●					

**Figure 1c: Haoma Mining Pilbara locations with minerals targeted**

Haoma now has important strategic relationships with **Atlas Iron (Hancock Prospecting)** at Mt Webber and with **Calidus Resources** (soon to begin mining and processing gold bearing ore at Marble Bar) and **Pirra Lithium Pty Ltd** (owned equally by Calidus and Haoma).

These relationships are important to Haoma for several reasons, not least of which is they allow the small team at **Haoma to remain single mindedly focused on the Elazac Process to extract gold, PGM and Rare Earths and Strategic Minerals from Pilbara ores.**

**Since Haoma's Annual Report further test work has been undertaken by Haoma on Atlas Iron samples taken from RC drilling of low-grade iron-ore north of Mt Webber (RC drill samples have maximum size 6mm i.e., all sample < 6mm).**

The test work showed using a combination of **wet beneficiation** and **magnetic separation** it was possible to recover a **magnetic fraction of 66% Fe** (approximately 27.5% of the low-grade iron-ore sample 1313, see Figure 8 below), while the **non-magnetic fraction contained 22% Fe.**

This result **upgrades the potential for mining a very large area (see Figure 6 below) of similar low-grade iron-ore** on M45/1197 (held by Atlas Iron and subject to Haoma's Fe Royalty Agreement and Haoma has rights to all other minerals); and E45/2922 (held 100% by Haoma).

Haoma has been active in many areas and aspects of its business. These include:

1. Test work activities on recovering gold at Bamboo Creek
2. Mt Webber and ongoing review of opportunities for ‘working with’ Atlas Iron
3. Haoma and Calidus equally owned company, Pirra Lithium Pty Ltd, involved in **lithium exploration near Marble Bar (See locations in Figures 11a and 11b below.)**,
4. Exploration for Rare Earths and Strategic Minerals at Mt Webber and Spear Hill near Mt Webber,
5. Elazac Quarry at Cookes Hill, covering both Haoma’s royalty from dolerite sales plus gold and lithium exploration in the area,
6. Other activities in the Pilbara, and
7. Ravenswood in North Queensland.

Considerable detail on the above topics has been presented to shareholder over the last 12 months and earlier in special reports over the last 12 months and earlier \Haoma reports.

Today I will mainly focus on Haom’s recent activities in relation to test work at Bamboo Creek, iron ore mining and exploration at Mt Webber and the surrounding areas and lithium, Rare Earths and Strategic Metals exploration at Spear Hill, Bamboo Creek and other areas int the Pilbara. I would be pleased to answer questions regarding all other Haoma activities.

## **1. Recent Test Work at Bamboo Creek, including Elazac Process test work on bulk samples of Mt Webber Iron Ore, Bamboo Creek Tailings and Spear Hill Tailings**

### **1.1 Haoma’s Elazac test work on two bulk samples of Mt Webber Iron Ore**

- 1) On September 15, 2021, shareholders were advised that test work was conducted on **three separate bulk samples of ‘goethite ore’** collected from the Dalton’s ‘Northern Zone’ (Daltons North and Daltons Ridge, known as ‘Lookout Point’) north of the current Mt Webber mine pit. (Haoma believes the current **iron ore resource in the ‘Northern Zone’ is about 3+ million tonnes of lower grade ‘goethite ore’**, (See Table 2 below).

Haoma’s tests recovered **gold dore** from smelting the ‘fines’ fraction (<0.85mm) separated after crushing the three bulk samples to 10mm. The quantity of the **‘fines <0.85mm’** fraction recovered varied for each of the three samples depending on the % Fe in each sample and whether the sample contained mainly ‘large rocks’ or ‘fines’ – in total about 3.4% of the bulk samples collected were <0.85mm fines.

**The gold grade in each sample varied. The average gold grade was 21.16g/t based on gold dore recovered from each of the three samples of ‘fines <0.85mm’** – obviously a significant result.

- 2) In December 2021 a **29.7kg sample** was selected from the **95 tonnes of Mt Webber ‘low grade iron ore’ on the Bamboo Creek pad**. The 29.7kg sample was crushed to 10mm, mixed in water and the <0.85mm ‘fines’ fraction extracted (10.835kg, 36.38% of the 29.7kg sample).

The Bamboo Creek test-work resulted in the recovery of **a Precious Metal Concentrate** (from the extracted **‘fines <0.85mm’ fraction from Mt Webber iron ore**) **without smelting** – analyses by XRF measured:

- **33.73% iron,**
- **2.02% gold, and**
- **6.59% PGM (Platinum Group Metals).**

**The ‘back calculated’ gold grade of the ‘fines <0.85mm’ fraction was 28.48g/t gold.**



## **1.2 Elazac Process test work on bulk samples of Bamboo Creek Tailings and Spear Hill Tailings**

Since October 13, 2021, similar tests as conducted on ‘fines <0.85mm’ fraction from Mt Webber ‘low grade iron ore’ were conducted in the Bamboo Creek Laboratory on samples of:

- 1.47kg of **Bamboo Creek Tailings**, and
- 16.8kg of **Spear Hill Tailings**. (See Haoma Mining Shareholder Report, June 15, 2021 and Update, September 15, 2021.)

Precious metal concentrates were recovered (‘fines <0.75 mm’) **without smelting**, the following XRF grades were measured in each concentrate sample recovered:

### **1. Bamboo Creek Tailings ‘fines <0.75 mm’, concentrate recovered:**

- **11.3% iron,**
- **0.69% gold, and**
- **9.21% PGM (Platinum Group Metals).**

The ‘back calculated’ gold grade of the Bamboo Creek Tailings was **13.86g/t gold**.

### **2. Spear Hill Tailings, ‘fines <0.75 mm’ concentrate recovered:**

- **43.57% iron,**
- **2.89% gold,**
- **6.50% PGM (Platinum Group Metals), and**
- **0.58% Rubidium, and**
- **10.4% Rare Earths.**

The ‘back calculated’ gold grade of Spear Hill Tailings was **80.72g/t gold**.



**Figure 2: Bamboo Creek Processing Plant, Pilbara WA.**

Haoma has recently completed the **acquisition of machinery and equipment** needed to commence gold production at the Bamboo Creek Processing Plant. There have been trucking delays however we now expect the equipment to be at Bamboo Creek within 7 days.

While there are good water storage facilities at Bamboo Creek there has been no significant ‘rains’ during the current wet season. For this reason, in the next month we expect nearby bore-fields will be upgraded to increase the supply of water.





**Figure 3:** Bamboo Creek Processing Plant



**Figure 4:** Bamboo Creek Processing Plant



**Figure 5:** Bamboo Creek Tailings Storage with Bamboo Creek Processing Plant in background

## 2.1 Haoma's Mt Webber JV with Atlas Iron and Haoma's Iron Ore areas in the Pilbara

Haoma's geological management has been re-assessing all prior iron ore drilling data from the Daltons tenement (now M45/1197) where the Mt Webber iron ore mine is operated by Atlas Iron (owned by Hancock Prospecting).

Iron ore is mined from M45/1197 by Atlas Iron while Haoma receives a royalty and owns all other metals. (See details in Haoma's **Shareholder Update of September 15, 2021**).

Haoma's future royalty is based on the Excess Reserve over 24.37 million tonnes of the combined amount of remaining reserve and tonnes mined. The uplift payment per Excess Reserve is currently \$1.63 per tonne (\$1.38 indexed by CPI from the Sale Agreement date of March 23, 2012).

Haoma recently obtained from the **WA Department of Mines (DMIRS)** the *Atlas Iron, April 2015 Technical Annual Report for the period ending March 29, 2015*, covering M45/1197 (Atlas owned), E45/2922, E45/4474 & E45/4176 and numerous other tenements (all 100% Haoma owned) near the Mt Webber Mine (M45/1197).

While Atlas had previously provided Haoma with the 2014 Daltons North (M45/1197) shallow RC drilling data, the information Atlas provided to Haoma (from the previous owners) **excluded the LOI (Loss on Ignition) results!**

Haoma's re-assessment work included a re-tabulation of drill hole data using **an iron ore 'cut-off' grade >40% Fe**. **Table 1** below shows examples of wide intersections from 2014 Drill Hole assays from Haoma's **E45/2292** using an iron ore 'cut-off' grade >40% Fe **without LOI results**.

HoleID	Depth From (m)	Depth To (m)	Average Grade Over Intersection									
			Fe%	SiO2%	Al2O3%	TiO2%	CaO%	P%	S%	MgO%	MnO	Na2O%
MWRC1246	16	96	43.52%	31.56	1.05	0.05	0.03	0.04	0.05	0.06	0.4	0.02
MWRC1248	0	10	50.30%	16.16	4.11	0.12	1.27	0.12	0.02	0.17	0.01	0.06
MWRC1248	28	44	41.53%	39.02	1.34	0.03	0.02	0.05	0.03	0.03	0.05	0.01
MWRC1249	0	22	51.18%	20.05	0.95	0.02	0.01	0.05	0.08	0.03	0.2	0.01
MWRC1249	28	40	41.20%	39.91	1.52	0.06	0.03	0.02	0.05	0.04	0.03	0.01
MWRC1249	44	74	40.51%	36.81	0.87	0.04	0.04	0.01	0.09	0.08	0.98	0.02
MWRC1250	0	14	44.97%	29.62	1.8	0.06	0.17	0.09	0.04	0.16	0.02	0.03
MWRC1253	0	96	42.34%	33.66	1.18	0.05	0.08	0.03	0.04	0.07	0.47	0.03

**Table 1: E45/2292 2014 Drill Hole intersections using an iron ore 'cut-off' grade >40%.**

In Haoma's Shareholder Update of September 15, 2021, shareholders were advised of **Haoma's** current Indicated Iron Ore Resource estimates covering M45/1197 (including Mt Webber) and the surrounding areas to Soansville – see **Figure 6** below.

Location of Haoma's current Iron Ore Resource estimates - Mt Webber Region to Soansville	Potential Resource
<b>'Waste Dump' at Mt Webber</b> (M45/1197), available to Haoma when Atlas advises they will not be processing or exporting the iron ore content.	4+mt
<b>North of the current Mt Webber Mine</b> (M45/1197) at 'Lookout Point'. (Drilled and reported to Haoma by Giralia and Atlas prior to June 2018.)	3+mt
<b>Below the current Mt. Webber Mine Pit</b> (M45/1197) from which about 24mt of iron ore has been mined and sold by Atlas Iron to September 2021.	4+mt
<b>Indicated Resources on Haoma Mining 100% owned tenements</b> covering from outside <b>Mt Webber</b> (M45/1197) to <b>Soansville</b> (Based on drill hole and sampling data collected by Giralia and Atlas prior to June 2018)	6+mt
<b>Total</b>	<b>17+mt</b>

**Table 2: Haoma's current Indicated Iron Ore Resource estimates – covering Mt Webber Region to Soansville.**







Hole ID	GDA Easting	GDA Northing	Total Depth (m)	Depth From (m)	Depth To (m)	Fe %	Al2O3 %	K2O %	MgO %	MnO %	Na2O %	P %	S %	SiO %	TiO %	LOI %
MWRC1177	738959	7618759	118	14	30	53.4	3.1	0.0	0.1	0.2	0.0	0.2	0.0	9.5	0.2	10.2
MWRC1178	738921	7618687	118	38	106	48.8	4.1	0.0	0.0	0.1	0.0	0.1	0.0	15.6	0.2	9.5
MWRC1179	738513	7619076	76	0	18	54.7	1.6	0.0	0.0	0.0	0.0	0.0	0.0	10.4	0.1	9.1
MWRC1192	738565	7618998	52	0	14	52.4	3.8	0.1	0.1	0.0	0.0	0.0	0.0	9.9	0.3	10.4
MWRC1195	738712	7619099	40	0	10	52.9	6.4	0.0	0.1	0.1	0.0	0.1	0.0	6.1	0.4	10.7
MWRC1200	738795	7619557	90	0	38	45.1	1.2	0.0	0.1	0.6	0.0	0.6	0.0	24.8	0.0	8.5
MWRC1201	738864	7619518	82	0	22	55.3	1.3	0.0	0.1	0.4	0.0	0.4	0.0	8.8	0.0	9.9
MWRC1203	738889	7619587	76	0	10	51.1	2.5	0.1	0.1	0.9	0.0	0.9	0.0	11.7	0.1	10.7
MWRC1204	738870	7619607	70	0	30	44.9	1.8	0.0	0.1	0.2	0.0	0.2	0.0	27.4	0.1	5.9
MWRC1205	738736	7619399	70	0	10	52.6	1.8	0.1	0.1	2.2	0.0	2.2	0.0	10.4	0.1	9.7
MWRC1206	738714	7619417	46	20	34	41.9	0.6	0.0	0.0	1.0	0.0	1.0	0.0	31.0	0.0	7.0
MWRC1208	738817	7619453	46	0	22	52.5	2.1	0.0	0.0	0.2	0.0	0.2	0.0	13.3	0.1	8.8
MWRC1210	738775	7619524	58	0	14	48.6	2.1	0.1	0.0	1.8	0.0	1.8	0.0	18.2	0.0	7.9
MWRC1211	738809	7619505	46	0	44	43.0	1.1	0.0	0.0	0.5	0.0	0.5	0.0	28.5	0.0	8.0
MWRC1212	738842	7619483	52	0	42	47.7	1.7	0.0	0.1	0.5	0.0	0.5	0.0	20.2	0.1	8.8
MWRC1214	738832	7619582	60	0	22	47.8	1.7	0.1	0.1	0.4	0.0	0.4	0.0	19.6	0.1	9.3
MWRC1215	738856	7619569	58	0	20	52.6	1.4	0.0	0.0	0.5	0.0	0.5	0.0	12.2	0.0	10.2
MWRC1216	738879	7619555	70	0	24	54.4	1.4	0.0	0.1	0.4	0.0	0.4	0.0	8.7	0.0	10.6
MWRC1219	738732	7619451	70	14	36	47.2	0.8	0.0	0.0	0.1	0.0	0.1	0.0	22.7	0.0	8.6
MWRC1220	738671	7619539	64	0	24	52.0	2.1	0.1	0.3	1.5	0.1	1.5	0.0	9.1	0.2	11.3
MWRC1221	738710	7619511	76	0	26	42.0	0.8	0.0	0.0	0.6	0.0	0.6	0.0	30.7	0.0	7.4
MWRC1222	738743	7619489	82	0	40	49.8	2.2	0.0	0.0	0.5	0.0	0.5	0.0	16.1	0.1	9.6
MWRC1223	738882	7619503	88	0	18	47.4	1.3	0.0	0.0	0.1	0.0	0.1	0.0	23.1	0.1	7.2
MWRC1238	738532	7619110	64	0	32	46.6	5.3	0.0	0.1	0.1	0.0	0.1	0.0	17.4	0.3	9.3

**Table 3: Atlas 2014 - ML 45/1197, Daltons North drilling assays using Fe cut off greater than 40%.**

**Figure 8 below is important as it includes LOI readings for all samples shown.**

Over the last nine months Directors have become aware that Haoma's Pilbara tenements could be of considerable value as assays from 'shallow' drilling and sampling across **ML 45/1197 and Haoma's** many nearby tenements show a large number contain **goethite (FeO+H2O) with LOI, 8%-11%, and low impurities (aluminum and manganese oxide/asbestos).**

**On October 13, 2021 Haoma Shareholders were advised (<https://haoma.com.au/wp-content/uploads/2021/10/Haoma-Mining-NL-Shareholder-Update-October-13-2021.pdf>) that recent 'smelting research' showed that when 'goethite' (say 10%) was blended with say 20% 'magnetite' and 70% 'hematite' then 'just gas' and 'no coking coal' was needed to produce 'Green steel'.**

*"The Mt Webber tenement and Haoma's many nearby tenements (now held 100% by Haoma) contain significant quantities of 'goethite' iron ore (FeO (H2O)) which is usually of a lower iron ore grade than 'hematite' but contains fewer impurities and has a higher LOI (Loss on Ignition) of between 7% and 10% - these features of 'goethite' mean that when blended with say 20% 'magnetite' and 70% 'hematite' the 'combined' iron ore mix can be smelted by an 'induction furnace' using just gas and **no coking coal** – resulting in low CO2 emissions and 'Green steel'!"*

The lower cut off understandably shows **significantly more goethite iron ore** is available. (See Figure 4 below – **'Mt Webber JV – Haoma Hillside E45-2922 & M45-1197 – Drilling Summary Map.'**)

Data shown in **Table 6** of the **Atlas Iron, April 2015 Technical Annual Report for the period ending March 29, 2015** lists for Daltons North (M45/1197) the following small **Indicated Resource** based on the shallow drilling and an Fe 'cut-off' >50%:

- 467,774t of Fe 55.05%,
- LOI average 8.12%, and
- low XRF readings for % MnO, % MgO & % Al<sub>2</sub>O<sub>3</sub>.

In addition, Haoma's management knows from recent test work that 'wet beneficiation' (after crushing 'goethite' to 10mm), which extracts the '<0.85µm' fraction, results in the % Fe grade in the remaining iron ore (about two thirds) to be about 5% higher than the initial overall % Fe grade. (See Haoma Shareholders Update, September 15, 2021)

Haoma understands there are additional costs in using 'wet beneficiation' to increase the % Fe grade in about two-thirds of goethite iron ore.

## **2.2 Atlas Iron results from RC exploration drilling at Daltons North and Daltons Ridge on M45/1197**

Since Haoma's Shareholder update sent to shareholders on February 3, 2022, Haoma on February 21, 2022 received from Atlas Iron the following results of RC exploration drilling at Daltons North and Daltons Ridge on M45/1197. (See Table 4 below.)

The latest results will be used by Atlas in their model to estimate the iron ore resource at Daltons North and Daltons Ridge, north of the current Mt Webber Mine (M45/1197). The location of proposed additional RC drilling is shown in Figure 7 below.

HOLEID	From	To	Total	Fe	SiO <sub>2</sub>	Al <sub>2</sub> O <sub>3</sub>	P	LOI
MWRC1309	2m	18m	16m@	58.75	4.51	2.55	0.12	7.85
MWRC1310	2m	20m	18m@	57.02	8.2	1.42	0.11	7.3
MWRC1311	0m	11m	11m@	60.39	4.07	1.42	0.04	7.05
MWRC1312	0m	20m	20m@	53.05	11.68	3.34	0.1	8.2
MWRC1317	0m	10m	10m@	57.69	6.56	2.25	0.11	8.31

**Table 4: Shallow mineralisation intercepts - Daltons North & Daltons Ridge Prospects (Jan 2022).**







## 2.3 USA National Academy of Science ‘quote’ covering Goethite

Haoma has become aware that the USA National Academy of Science released the following ‘quote’ in November 2021. Haoma is also aware that Japanese refiners are working to replicate the findings below, it is also believed the Chinese have been in ‘this space’ since 2017.

### Significant ‘Quote’

*We found at high pressure–temperature (P-T) that the goethite  $FeO_2H$  transforms to P-phase  $FeO_2$  via a two-step dehydrogenation process. First it releases some hydrogen to form P-phase  $FeO_2Hx$ , and then it continuously releases the remaining hydrogen through prolonged heating. This work provides an important example that the dehydration reaction changes to dehydrogenation of  $FeO_2H$  at the lower mantle conditions and the cycles of hydrogen and water become separated.*

### Results

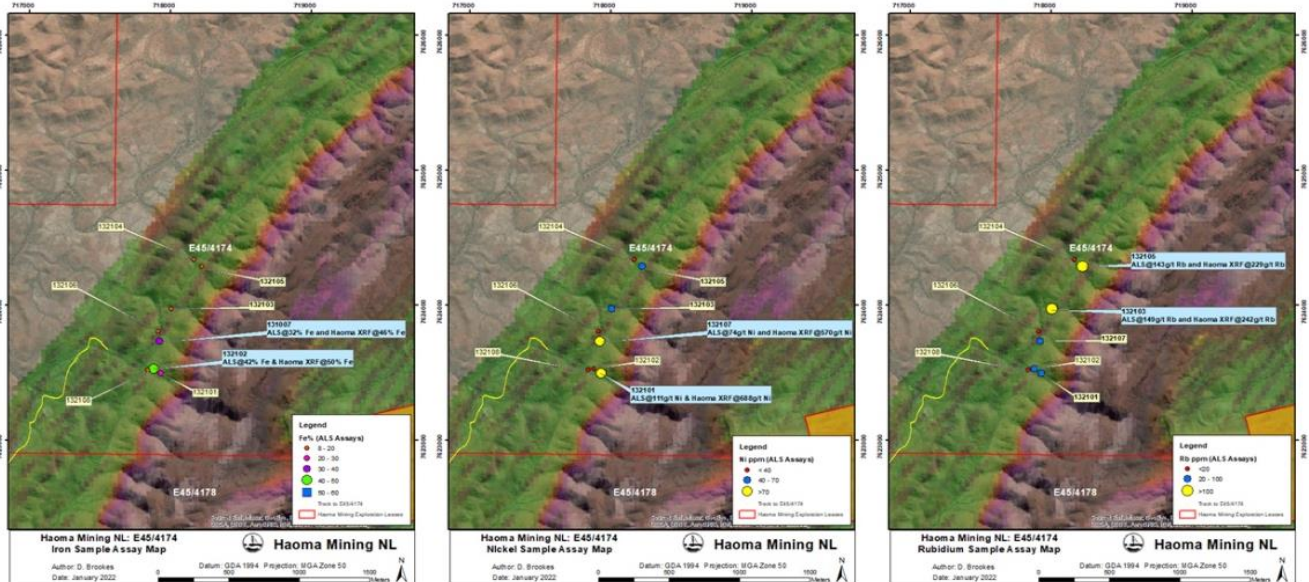
High P-T experiments on  $FeO_2H$  were conducted in a diamond anvil cell (DAC) integrated with laser heating. The starting materials were either pre-compressed goethite ( $\alpha$ - $FeO_2H$ ) powders in Ar or Ne pressure media or hematite ( $Fe_2O_3$ ) in water pressure medium that is chemically equivalent to goethite as  $Fe_2O_3 + H_2O = 2FeO_2H$  (13, 14). Samples were gradually compressed to the target pressure range of 71–133 GPa, before being heated by a double-sided neodymium-doped yttrium aluminium garnet (Nd: YAG) laser up to 10 min. Using a synchrotron X-ray diffraction (XRD) technique, the cubic P phase was identified to form above 72 GPa and preserved in the temperature-quenched sample (Fig. 1 A–C). The P phase was stable at least up to 133 GPa and 2,000 K. The formation of the P phase was well reproduced in all experiments with a variety of samples and media over a wide pressure range.

## 2.4 Soansville (E45/4174) proposed drilling program – 100% Haoma

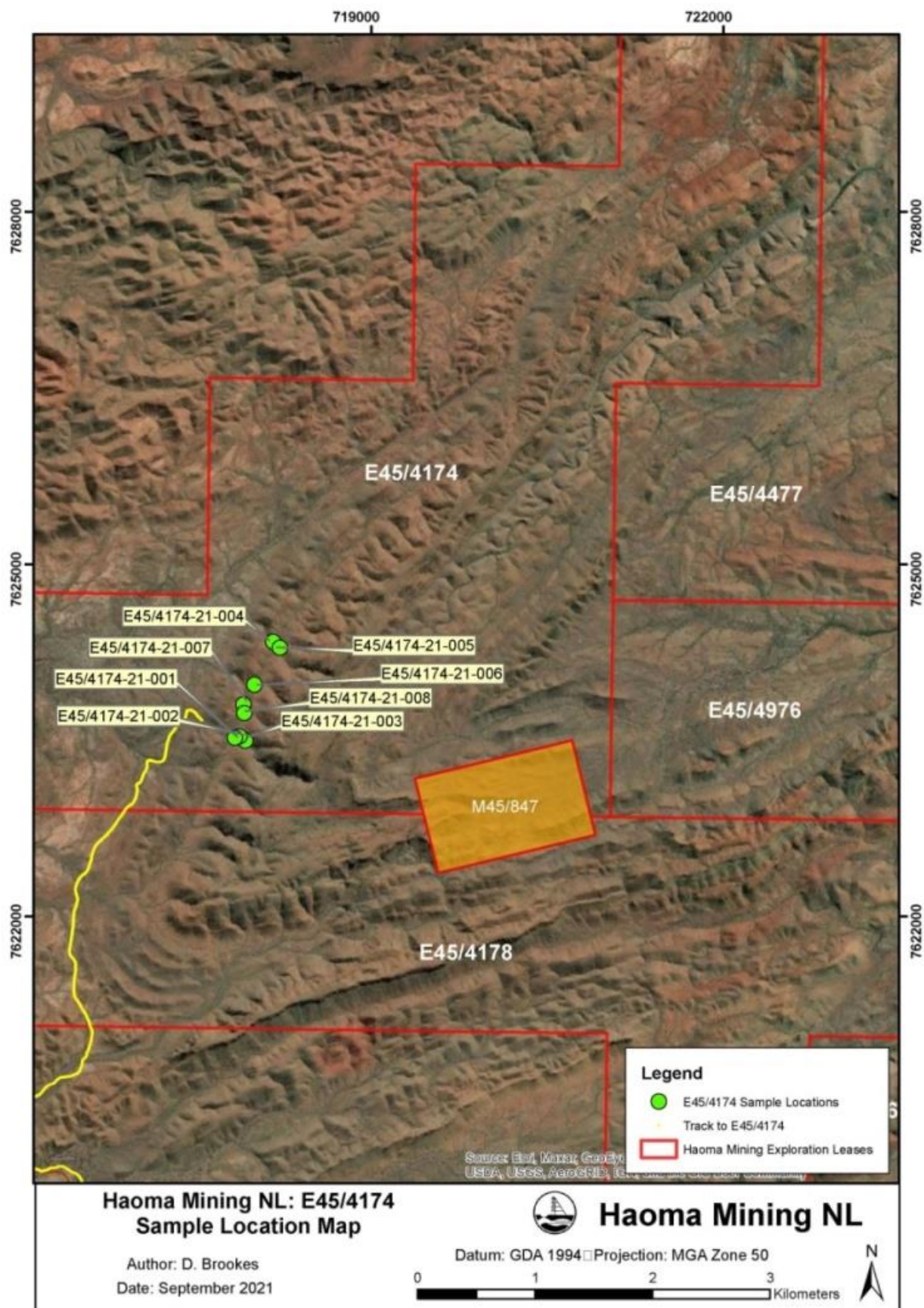
In the Soansville area, based on the positive surface sample assays shown below in Table 5 and Figures 5 and 6, Haoma will after the wet season undertake a drilling program to better define a shallow iron ore resource in the Soansville area. The drilling program will comprise **20 shallow holes to 20m depth**, over an area which covers up to 10km of outcrop.

Sample	ALS Assay	Haoma XRF
102 – iron, ALS	42.7 %	50.36%
107 – iron, ALS	32.7 %	46.31%
101 – nickel	111.5 g/t	688.0 g/t
107 – nickel	74.0 g/t	570.4 g/t
103 – rubidium	149.0 g/t	242.6 g/t
105 – rubidium	143.5 g/t	229.7 g/t

**Table 5: E45/4174 ‘surface’ sample ALS assay and Haoma XRF assay results.**



**Figure 9: Soansville E45/4174 sample locations showing results for iron, nickel & rubidium.**



**Figure 10: E45/4174 surface sampling locations.**



## 2.5 Pirra Lithium Pty Ltd - Haoma Mining and Calidus Resources Pilbara Lithium Exploration Venture

On February 21, 2022 Haoma shareholders were advised of the formation of Pirra Lithium Pty Ltd (ACN 656 564 457). Pirra Lithium is owned equally by Haoma Mining and Calidus Resources Limited (ASX: CAI).

Pirra Lithium has been assigned tenements and lithium rights across the most prospective lithium ground in each of the Haoma and Calidus portfolios. Under the terms of the Agreements between the parties Calidus will transfer 4 exploration leases to Pirra Lithium and will issue 1,461,262 Calidus ordinary shares to Haoma. Haoma has assigned its Lithium rights across its tenements to Pirra Lithium. The combined tenements and lithium rights cover 1,063km<sup>2</sup>.

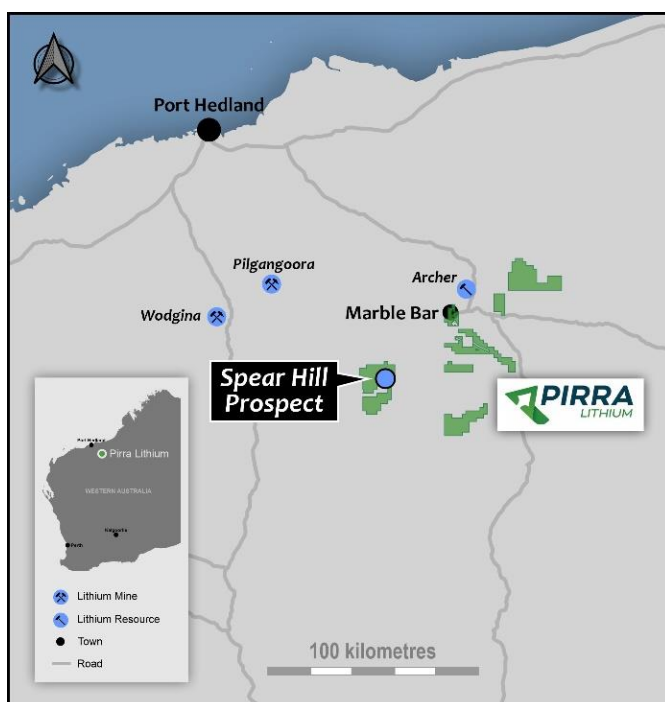
### Announced, March 8, 2022:

**Haoma is pleased to advise Haoma shareholders of an early discovery by Pirra Lithium of a significant lithium prospect at Spear Hill.** Pirra Lithium has identified a substantial lithium-bearing pegmatite with a mapped strike length of more than 1km.

Pirra Lithium geologists collected thirty-four rock-chip samples of the pegmatite and the adjacent granitic country rocks. Assays of the pegmatite yielded 0.66%-2.34% Li<sub>2</sub>O, with two samples of metasomatized country rock adjacent to the pegmatite yielding 2.78% and 2.91% Li<sub>2</sub>O. (See assays in Table 6 below.)

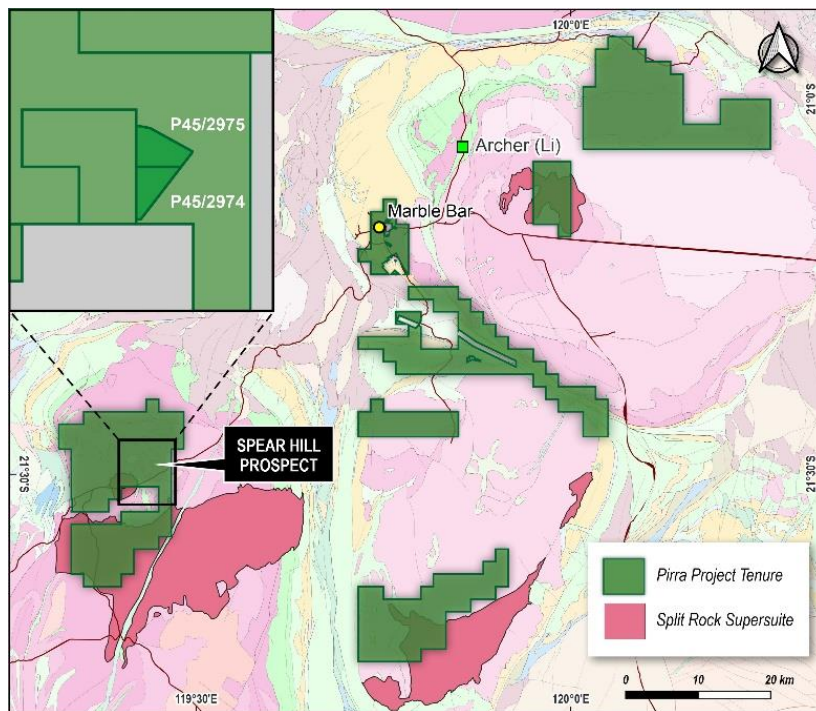
Work is continuing to determine the full extent of the pegmatite and to identify other pegmatites in the vicinity. A maiden drilling program will be prepared, and Pirra Lithium will continue an aggressive exploration program elsewhere on its tenement package.

The Spear Hill area, about 50km SW of Marble Bar, is part of the historic Shaw River tin field. The area has been mined for alluvial tin since about 1893 with a little more than 6,500t of tin concentrate won from the field up until 1975.

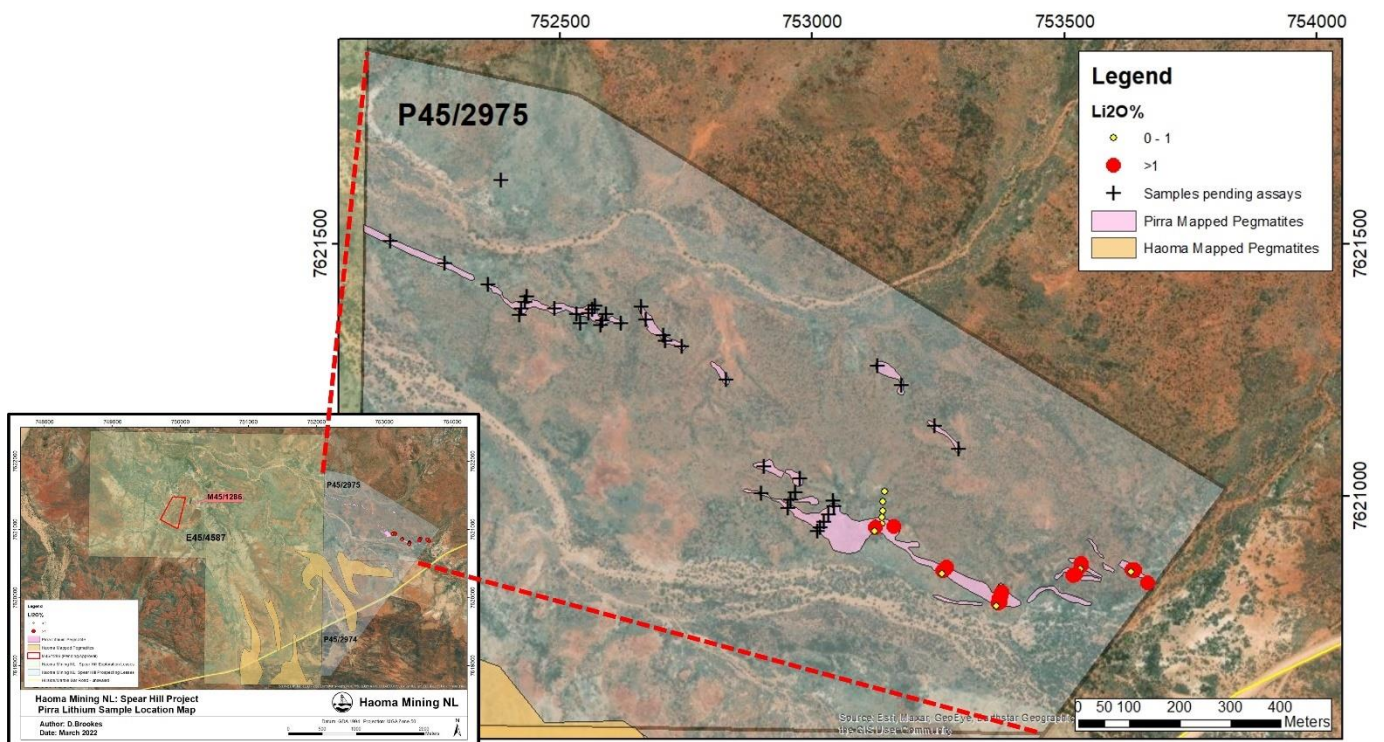


**Figure 11a: Location of the Spear Hill area and tenement holdings and lithium rights of Pirra Lithium**



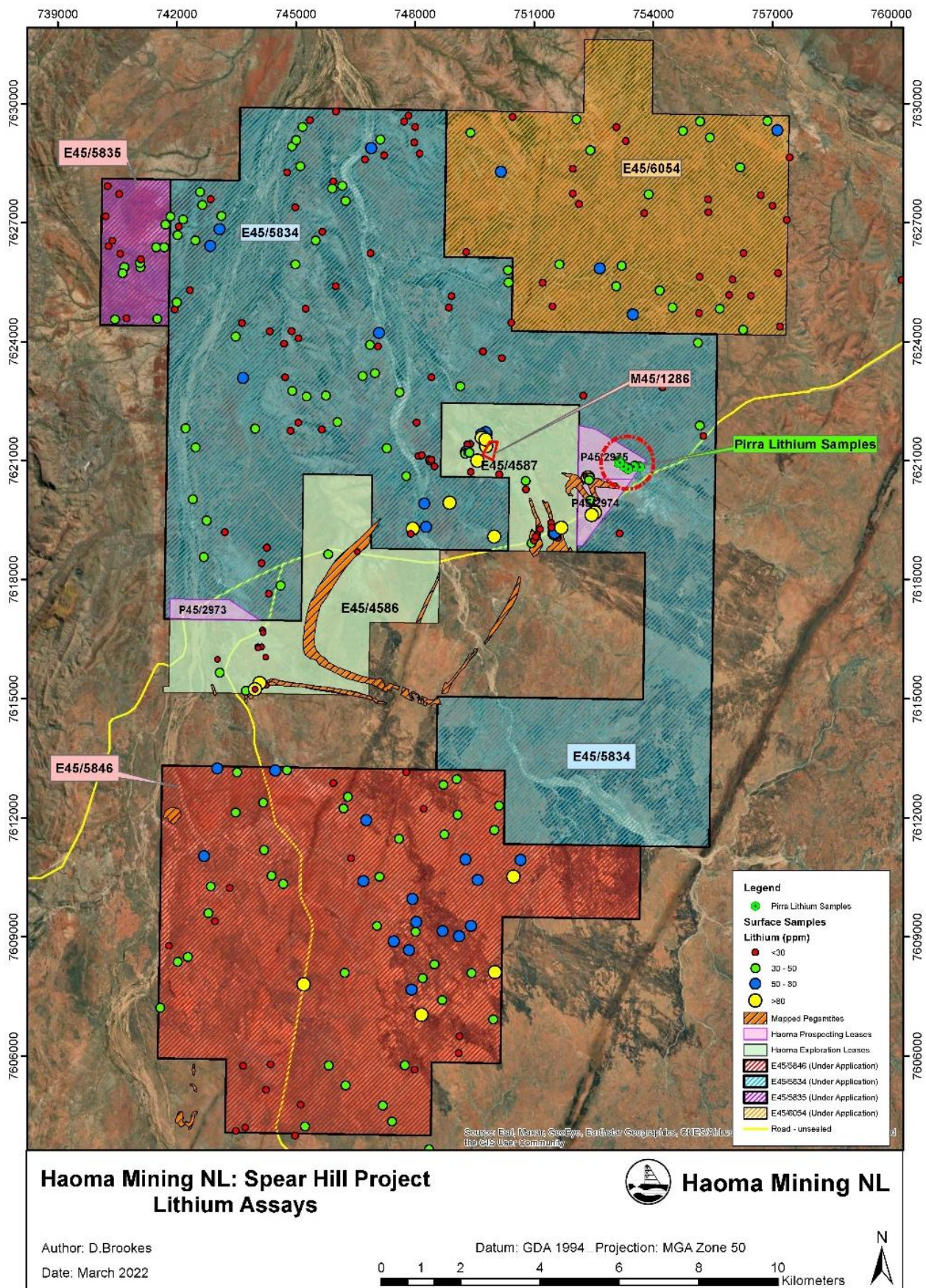


**Figure 11b:** Location of the Spear Hill area and tenement holdings and lithium rights of Pirra Lithium on a background of GSWA's 1:500,000 state bedrock geology and linear structures layers. (See also Figure 1b above.)



**Figure 12:** Haoma Mining Spear Hill Project Group showing Pirra Lithium sample locations.





**Figure 13: Haoma Mining Spear Hill Project Group showing all Lithium assay results including recent rock chip sampling by Pirra Lithium.**



## **Pegmatite assays and mineralogy**

Thirty-four rock chip samples were collected from the pegmatite, metasomatized country rock adjacent to the pegmatite, and background country rock. Samples were collected from five traverses perpendicular to the strike of the pegmatite. Along each traverse, samples were collected 3-12m apart to ensure that all the main components of the pegmatite, including lepidolite- and spodumene-poor zones, were sampled. At each site, the pegmatite was sampled according to the mineralogical proportions of both lithium minerals and barren minerals (feldspar and quartz) present in the outcrop. Samples ranged from fine grained to coarse grained, with the majority medium to coarse grained.



**Figure 14:** Samples of coarse spodumene (LHS) and coarse lepidolite (RHS) from samples sent for assay.

Assays for  $\text{Li}_2\text{O}$ , Cs, Rb, Fe, and P, are shown in Table 6 below. All Sn values were less than 141ppm and Ta values less than 378ppm. Samples of pegmatite returned values of  $\text{Li}_2\text{O}$  between 0.66% and 2.34%, with most between 1.31% and 2.34%. Samples of moderately to strongly altered granite adjacent to the pegmatite span a wide range from 0.43% to 2.91%  $\text{Li}_2\text{O}$ . Values for P and Fe in the pegmatite are, respectively, less than 300ppm and 0.57%, with the exception of sample CL009511 with 700 ppm P and 1.07% Fe; higher values are confined to samples consisting, wholly or partly, of metasomatized granite.

After initial discovery of the pegmatite and sampling, an interpreted fault-offset extension to the NW and a possible separate body about 200m to the NNE were identified. A further 40 rock-chip samples were collected and have been sent to the laboratory for priority assay. Results are pending.



**Figure 15:** Outcrop of the Spear Hill pegmatite.



Sample No.	Easting	Northing	Li2O (%)	Cs (ppm)	Rb (ppm)	Fe (%)	P (ppm)	Rock type and mineralogy
CL009501	753643	7620860	0.01	4	160	1.42	400	Weakly altered granite; no Lpd or Spd; mg
CL009502	753640	7620855	1.94	795	6375	1.24	200	Altered granite & pegmatite with ~5% Lpd; fg to cg
CL009503	753637	7620852	2.00	492	6895	0.31	<100	Pegmatite; ~25% Lpd & ~25% Spd; cg
CL009504	753634	7620855	1.72	475	5580	0.20	200	Pegmatite; ~40% Lpd & ~10% Spd; cg
CL009505	753632	7620850	0.54	197	2720	0.58	100	Moderately altered granite; no Lpd or Spd; fg to mg
CL009506	753665	7620829	1.61	533	5200	0.22	200	Pegmatite; ~30% Lpd & ~45% Spd; cg
CL009507	753539	7620872	0.02	11	140	2.05	500	Gneissic granite; no Lpd or Spd; fg to mg
CL009508	753534	7620867	1.98	501	5090	0.42	100	Strongly altered granite & pegmatite; ~20% Lpd & ~15% Spd; mg to cg
CL009509	753533	7620861	2.34	975	6910	0.16	100	Strongly altered granite & pegmatite; ~20% Lpd & ~10% Spd; mg to cg
CL009510	753532	7620856	0.26	128	1105	0.59	200	Weakly altered granite; no Lpd or Spd; mg
CL009511	753524	7620848	0.66	396	2625	1.07	700	Strongly altered granite & pegmatite; ~8% Lpd & no Spd; mg to cg
CL009512	753523	7620846	1.31	290	4025	0.19	300	Pegmatite; ~20% Lpd & ~45% Spd; cg
CL009513	753516	7620843	2.78	1220	8745	1.38	500	Moderately altered granite; no Lpd or Spd; mg
CL009514	753374	7620822	0.01	8	150	0.71	<100	Weakly altered granite; no Lpd or Spd; mg
CL009515	753376	7620811	2.91	1434	9510	3.41	600	Altered granite & amphibolite; no Lpd or Spd; fg to mg
CL009516	753374	7620807	2.15	350	5305	0.23	<100	Pegmatite; ~35% Lpd & ~35% Spd; mg to cg
CL009517	753375	7620803	2.25	397	5815	0.14	<100	Strongly altered granite & pegmatite; ~35% Lpd & ~10% Spd; mg to cg
CL009518	753371	7620798	2.09	449	6030	0.13	200	Strongly altered granite & pegmatite; ~23% Lpd & ~27% Spd; mg to cg
CL009519	753372	7620791	1.66	466	5365	0.36	<100	Strongly altered granite & pegmatite; ~22% Lpd & ~28% Spd; mg to cg
CL009520	753368	7620788	1.68	267	4760	0.25	<100	Strongly altered granite & pegmatite; ~20% Lpd & ~20% Spd; mg to cg
CL009521	753366	7620783	0.02	7	165	1.92	500	Gneissic granite & pegmatite; no Spd or Lpd; mg to cg
CL009522	753266	7620859	2.01	1238	7260	1.92	300	Heavily altered granite; ~5% Lpd; fg to mg

Sample No.	Easting	Northing	Li2O (%)	Cs (ppm)	Rb (ppm)	Fe (%)	P (ppm)	Rock type and mineralogy
CL009523	753265	7620857	2.05	421	5725	0.15	<100	Strongly altered granite & pegmatite; ~45% Lpd & ~10% Spd; mg to cg
CL009524	753260	7620853	1.63	314	4775	0.16	<100	Strongly altered granite & pegmatite; ~33% Lpd & ~2% Spd; mg
CL009525	753258	7620848	0.01	5	160	0.93	100	Weakly altered granite & pegmatite; no Spd or Lpd; mg
CL009528	753144	7621009	0.01	13	170	1.05	<100	Weakly altered granite; no Lpd or Spd; mg
CL009529	753141	7620989	0.01	7	195	0.88	<100	Weakly altered granite; no Lpd or Spd; mg to cg
CL009530	753140	7620972	0.01	5	350	0.50	<100	Weakly altered granite; no Lpd or Spd; mg to cg
CL009531	753139	7620959	0.26	139	1555	0.62	<100	Strongly altered granite; no Lpd or Spd; mg
CL009532	753139	7620946	0.43	648	3250	0.85	200	Altered granite & pegmatite; no Lpd & ~2% Spd; mg to cg
CL009533	753126	7620947	0.75	362	3020	0.67	100	Strongly altered granite & pegmatite; ~15% Lpd & ~15% Spd; fg to cg
CL009534	753126	7620939	1.29	379	4460	0.23	<100	Strongly altered granite & pegmatite; ~18% Lpd & ~2% Spd; mg to cg
CL009535	753124	7620932	0.81	510	3385	0.57	200	Pegmatite; no Lpd & ~2% Spd; cg
CL009551	753162	7620940	1.89	390	4765	0.10	<100	Strongly altered granite & pegmatite; ~30% Lpd & ~5% Spd; cg

**Table 6: Li<sub>2</sub>O, Cs, Rb, Fe, and P values for rock-chip assays from the lithium pegmatite on P45/2975. Also included is a brief description of each sample, a visual estimate of the abundance of lithium-bearing minerals (Lpd = lepidolite, Spd = spodumene) and grain size (fg = fine grained, mg = medium grained, cg = coarse grained).**

### **Lithium and Rubidium Assays**

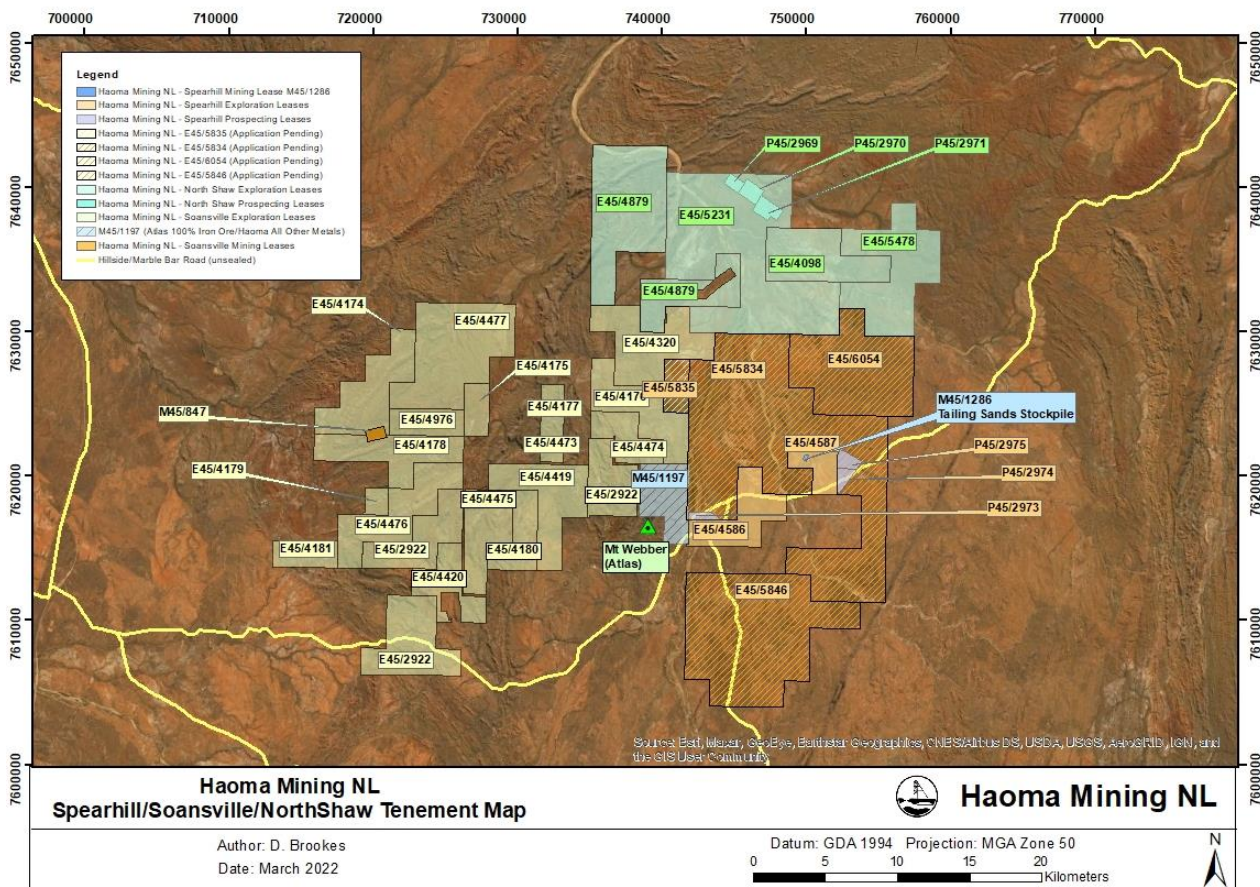
The above surface sample **lithium assay grades** indicate that the area sampled by Pirra near Spear Hill is encouraging and indicate the potential for the area near Spear Hill to contain a commercial lithium resource. However, **the lithium mineralogy plus size and grade (based on drilling) still needs to be determined.**

Of additional interest to Haoma are the **high grades of rubidium** measured in many of the surface samples.

Rubidium is a **Strategic Metal of significant value**, more important today than ever before. Up until now commercial rubidium is mainly recovered from processing other metals, the above rubidium assays indicate the potential for the area to contain a commercial rubidium resource of

Haoma has already shown that the 2 million tonnes of tailings near Spear Hill (see Figure 16 below) contain a commercial rubidium resource which can be recovered using a process developed by Haoma, see Haoma Shareholder Update, June 15, 2021. <https://haoma.com.au/wp-content/uploads/2021/06/Haoma-Mining-NL-Shareholder-Update-June-15-2021.pdf>

## 2.6 Spear Hill Lithium and Rare Earths Locations



**Figure 16: Haoma's Spear Hill Tenement Group C145/2016 comprising M45/1286, E45/4586, E45/4587, E45/5834 (under application), E45/5835 (under application) and E45/6054 (under application).**

Since Haoma's Rare Earths Activities update of September 19, 2019 test work on measuring and recovering Rare Earths and other elements was completed at Bamboo Creek and the University of Melbourne.

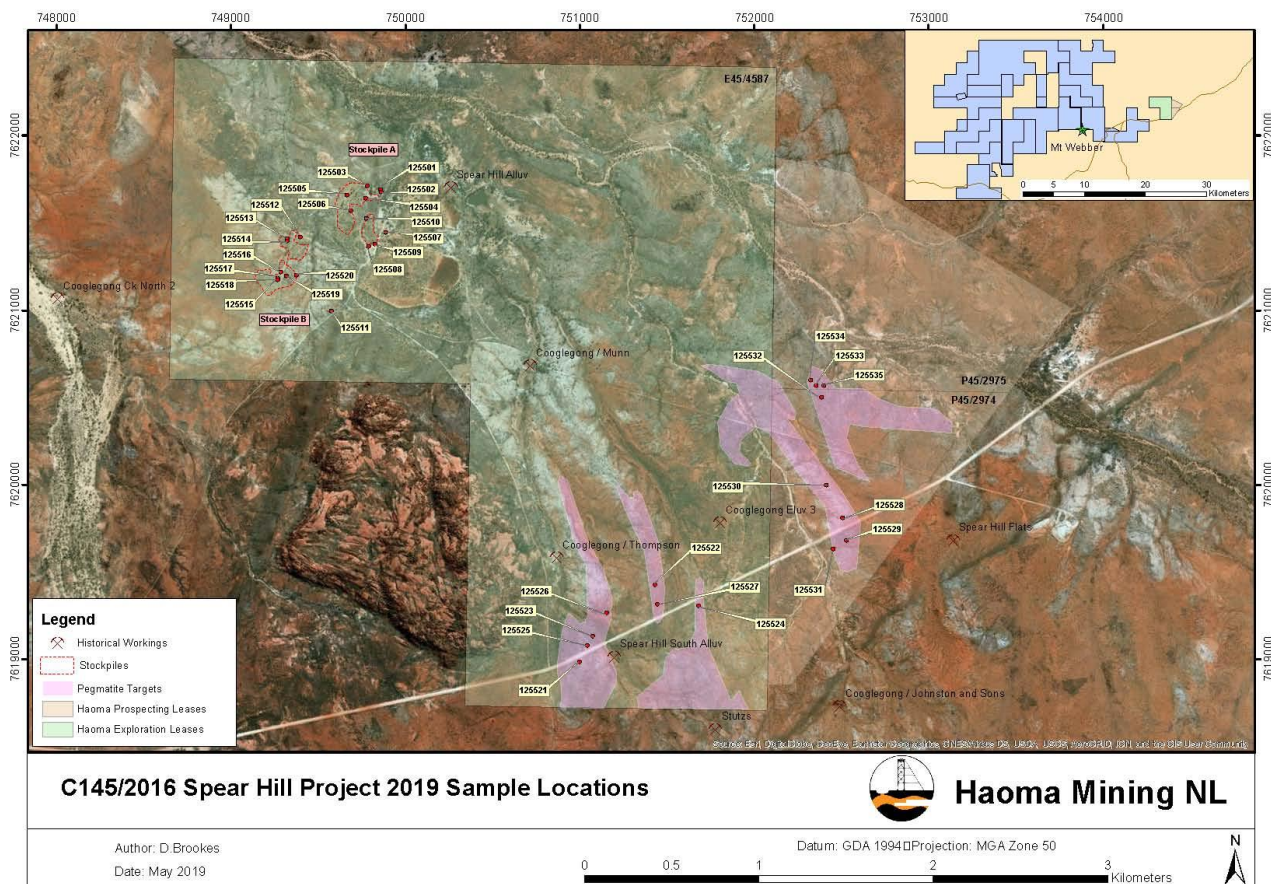
There are approximately **2 million tonnes of Spear Hill Tailing Sands** which were deposited in the 1970s by **Endeavour Resources Ltd** after recovering tin and tantalum. Haoma is hopeful the WA Mines Department will soon give Haoma permission to rehabilitate the area containing the tailing sand and the sands be trucked to Bamboo Creek for processing.



Element	Symbol	Atomic #	Nuggety Gully Scree Uni of Melb XRF May, 2019	Spear Hill Stockpiles A&B ALS July, 2019	Spear Hill Tailing Sands ALS May, 2020	Spear Hill Tailing Sands Bamboo Creek XRF Nov, 2020	Spear Hill Tailing Sands ALS Nov. 20, 2020
			(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
Scandium	Sc	21	196	NR	3.2	NR	2.70
<b>Yttrium</b>	<b>Y</b>	<b>39</b>	<b>1,128</b>	<b>48.1</b>	<b>30.0</b>	<b>30</b>	<b>28.73</b>
<b>Lanthanum</b>	<b>La</b>	<b>57</b>	-	<b>26.2</b>	<b>11.1</b>	NR	<b>10.0</b>
Cerium	Ce	58	2,659	60.6	39.4	NR	33.27
Praseodymium	Pr	59	-	6.8	2.3	NR	2.07
Neodymium	Nd	60	-	21.6	8.6	NR	7.33
Samarium	Sm	62	554	5.2	1.9	NR	1.65
Europium	Eu	63	>1,000 <sup>(*)</sup>	0.3	0.5	NR	0.47
Gadolinium	Gd	64	>1,000 <sup>(*)</sup>	4.1	1.95	NR	1.92
Terbium	Tb	65	>1,000 <sup>(*)</sup>	0.8	0.4	397	0.46
Dysprosium	Dy	66	-	6.2	3.6	1,491	3.84
Holmium	Ho	67	-	1.2	1.0	NR	0.97
Erbium	Er	68	1,680	4.9	4.0	NR	3.78
Thulium	Tm	69	-	0.9	0.8	1,491	0.78
Ytterbium	Yb	70	-	8.3	7.1	NR	7.21
<b>Lutetium</b>	<b>Lu</b>	<b>71</b>	-	<b>1.4</b>	<b>1.2</b>	NR	<b>1.11</b>
<b>Other Elements (not common)</b>							
<b>Rubidium</b>	<b>Rb</b>	<b>37</b>	<b>597</b>	<b>215.4</b>	<b>235.3</b>	<b>965</b>	<b>211.96</b>
Niobium	Nb	41	149	38.0	13.9	NR	6.37
Hafnium	Hf	72	2,964	NR	5.4	835	4.97
<b>Caesium</b>	<b>Cs</b>	<b>55</b>	-	<b>8.7</b>	<b>6.1</b>	NR	<b>5.38</b>

(\*) Conclusive identification and quantification not ascertained NR: Not recorded

**Table 7: Assays of Nuggety Gully Scree, Spear Hill Stockpiles A&B and Spear Hill Tailing Sands**



**Figure 17: Spear Hill Stockpiles A&B and pegmatite sample locations – May 2019**

## **2.7 Hard Rock Sales from Elazac Quarry, Cookes Hill (M45/1186)**

Haoma's hard rock Elazac Quarry at Cookes Hill (M45/1186) is operated under licence by Brookdale Contracting.

During the Year Ended June 30, 2021 Haoma sold 194,017 tonnes of 'hard rock' to Brookdale Contractors. These sales provided revenue of \$643,636.

In the following 6 months to December 31, 2021, Haoma sold 259,337 tonnes of 'hard rock' to Brookdale Contracting, generating revenue of \$957,197.

The 'quantity' of rock sales from the Elazac Quarry is expected to be maintained as significant upgrades to Port Hedland Port facilities have been announced, and ongoing infrastructure work being undertaken in the East Pilbara Region is expected to be maintained at current level.

Revenues for the previous two years and for the current year to date (July to December 2021) are shown in Table 8 below.

	<b>2020</b>	<b>2021</b>	<b>2022 (6 months)</b>
Ballast	-	\$110,532	\$339,489
Rock Armour	\$349,948	\$195,983	\$617,708
<b>July – December Total</b>	<b>\$349,948</b>	<b>\$306,515</b>	<b>\$957,197</b>
January – June Total	\$422,444	\$337,121	
<b>Full Year Total</b>	<b>\$772,392</b>	<b>\$643,636</b>	

**Table 8: Sales from Haoma's Elazac Quarry.**



### 3. Haoma's Activities at Ravenswood, Queensland

#### 3.1 Exploration Activities

In Queensland, Haoma's exploration activities in 2021 were significantly limited by movement restrictions imposed by governments to control the impact of the Covid-19 pandemic. Bulk sample trials and processing was delayed. The proposed sampling program is now anticipated to start in Quarter 4, 2022.

Haoma surrendered two exploration leases EPM17832 and EPM14038 during 2021.

This decision was based on several factors including:

- prioritising its activities and resources on the existing mining leases as its core assets as they have known resources ready for commerciality.
- As these two EPM's are isolated to the south of the project area, the distance from these EPM's to any processing location for the project group is deemed too far and not economical.
- All mining leases and the remaining EPM 8771 will be retained to reduce the size and project geographical footprint

Haoma's Senior Geologist has commenced work to consolidate and re-examine all legacy drill-hole and sampling results. This information will guide a further targeted exploration program after the bulk sample trials.

#### 3.2 Haoma's Top Camp Road House, Ravenswood, Queensland

Refurbishment and upgrade work at the **Top Camp Roadhouse, Ravenswood** is continuing.

Recently the retail shop area, product shelving and customer access was expanded. In addition, product lines in the shop were increased, and operating hours extended to facilitate catering for the local community and contractors, some of whom use the Top Camp facilities for accommodation.

The **Top Camp 'park amenities'** have been repaired and refurbished and new facilities added for the benefit of residents. It is expected that these modifications will support an increase in tourist visitation to the area.

A **back-up generator** has been connected to ensure power is always available to the Top Camp 'shop', accommodation and 'camp' facilities.

Access roads into and around Top Camp were recently re-surfaced, and new fuel bowsers added to service visiting vehicles.

The above upgrades and major contributions by Top Camp Managers', Cathy Mew and Mark Farris, have since September 2021 added to Top Camp revenue from **increased retail sales and accommodation bookings**.

New accommodation (subject to Council approval) is expected to be added in the next six months plus a swimming pool for the benefit of patrons.

Haoma shareholders travelling through the 'district' are welcome to call in at Top Camp and stay at a 50% discounted 'cabin' rate. To book, **please call Cathy Mew on (07) 4770 2168**.



**Figure 17a:** Aerial view of Haoma's Top Camp, Ravenswood, Queensland.



**Figures 17b & 17c:** Entrance to Top Camp Road House, Ravenswood and Café area

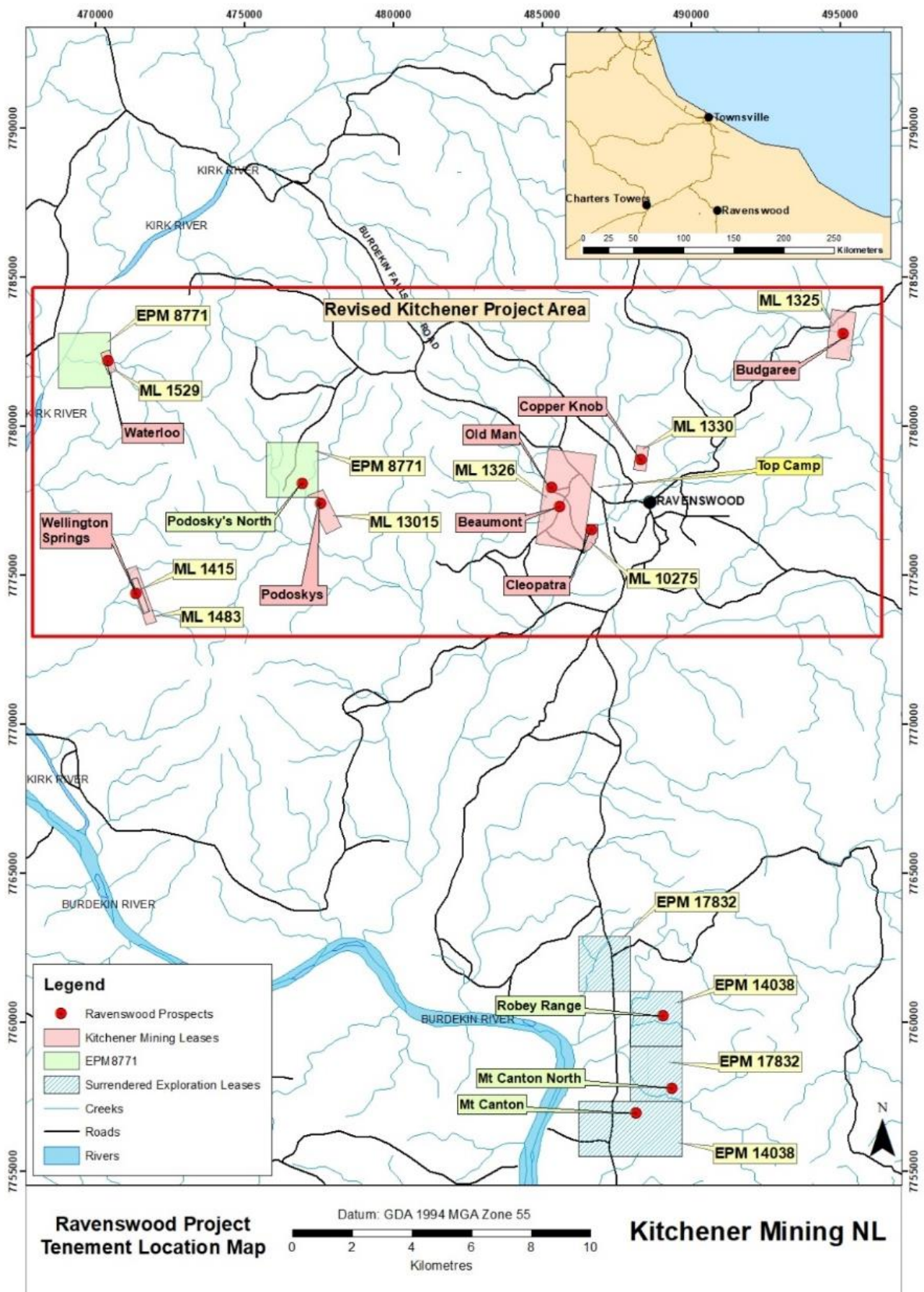




**Figure 18a: Refurbished accommodation cabins at Top Camp**



**Figure 18b: Refurbished accommodation cabins at Top Camp**



**Figure 19: Locations of Ravenswood tenements**



#### 4. Acknowledgements

The Directors wish to acknowledge and express their appreciation to all those who during the last year have contributed to the company's activities in the Pilbara and Ravenswood districts. In particular, the Board's thanks go to Mr. Peter Cole, Prof. Peter Scales, Mr. Hugh Morgan, Mr. Peter Williams and other consultants who have contributed to help **Haoma solve the gold, silver and Platinum Group Metals (PGM) assay problem associated with Pilbara ores; and the extraction of gold, silver, PGM and other metals from Pilbara ores.**

The Board also acknowledges the significant efforts of those personnel working at the remote Pilbara and Ravenswood operations. These people include Tristin Cole, Steven Wilson and geologist Darren Brookes at Bamboo Creek, Gerard Poot at the Comet Gold Mine and Tourist Centre, Geoffrey Myers at the Normay Gold Mine, and Cathy Mew and Mark Farris at Top Camp, Ravenswood.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Gary Morgan', with a stylized flourish at the end.

Gary C. Morgan  
Chairman

March 16, 2022